

REMARKS

Claims 1-16 are all the claims pending in the application.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims 9-13 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Davis et al. '092.

Claims 9-13 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Redman et al. '484.

Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Kodama '014.

Claims 1-5 and 7-8 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Kashiwagi et al. '408.

Claims 1-4 and 7-14 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Kodama et al. '031.

Claims 9-14 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Kodama et al. JP 2001-022255. (JP equivalent of Kodama et al. '031)

Claims 1-4 and 15-16 are rejected under 35 U.S.C. 102(b) as being fully anticipated by Nishikawa et al. JP 11-024538.

Claims 1-5 and 7-14 are rejected under 35 U.S.C. 102(e) as being fully anticipated by Takabayashi et al. EP1045296.

Claims 1-16 are rejected under 35 U.S.C. 103(a) as being fully anticipated by Takabayashi et al. EP 1045296, in view of Nishikawa et al. JP 11-024538.

The Applicants traverse the rejections and request consideration.

General Comments

The Examiner is requested to refrain from making cumulative and repeated rejections as considerable hardship has been caused to the Applicants as a result. MPEP 706.02 clearly states that:

Prior art rejections should ordinarily be confined strictly to the best available art. Exceptions may properly be made, for example, where:

(A) the propriety of a 35 U.S.C. 102 or 103 rejection depends on a particular interpretation of a claim;

(B) a claim is met only in terms by a reference which does not disclose the inventive concept involved; or

(C) the most pertinent reference seems likely to be antedated by a 37 CFR 1.131 affidavit or declaration.

Such rejections should be backed up by the best other art rejections available. **Merely cumulative rejections, i.e., those which would clearly fall if the primary rejection were not sustained, should be avoided.**

The Applicants respectfully submit that the present case does not fall under any of the exceptions noted above. Therefore, the repetitive rejections are believed to be a violation of the requirements noted above, in spirit if not literally.

Claim rejections under 35 U.S.C. § 112

The claims have been amended to further clarify the subject matter of the invention.

The subject matter of the invention lies in the combination of a stereoscopic image with a plane pattern image, characterized in that the plane pattern image is seen in different colors, although it is recorded at a similar wavelength. As the plane pattern image gets closer and closer to a mirror image, it is seen brighter in a lot more colors, even when the angles of incidence and exit of light on and from the plane pattern image depart from Bragg angle, as described in the Specification of this application.

Specifically, the present invention (as recited in claim 1) requires an image of a three-dimensional object and an image of a plane pattern are multi-recorded in a reflection hologram form. Moreover, the image of the three-dimensional object and the image of the plane pattern are required to be comprised by interference fringes formed by interference of reference light beams with diffracted light beams. Further, the diffracted light beams are created by the reference light beam, and have mutually different angles of incidence. Still further, the reference light beams are required to have the same angle of incidence, and the same wavelength as the light beams.

Further, with reference to claim 2, when the film is cut along a plane recited in claim 2, the hologram interference fringes of that cut section gets closer and closer to parallel. When it comes to one-dimensional diffusion in the direction normal to that plane, that hologram interference fringes on that cut plane are placed in a state nearly free of diffusion (mirror). Conversely, when it comes to one-dimensional diffusion in the direction parallel with the above plane (the plane defined with the angles of incidence and diffraction), the resulting image becomes dark as in a three-dimensional image with effects on color changes being hardly

obtainable, upon deviations from Bragg angle relative to the angle of incidence. Such a cut section is shown in Fig. 2b, where the normal direction is the direction coming out of the paper.

Using the features recited in claim 2, the effects on color changes are obtainable.

Prior art rejections

Redland and Davis shows a system for multi-recording some grating images at a small area into holographic pixels, thereby making a set of such hologram pixels. However, the hologram itself comprises a stack of simple diffraction gratings. This is believed to be completely different from the present invention.

The other cited references, Kodama, Kashiwagi, Nishikawa, Takabayashi, etc, relate to techniques for reproducing a three-dimensional image and a plane pattern image faithfully to the colors of the recorded laser; they make no reference at all to the capability of the invention of reproducing different colors with the same reference light wavelength and the angle of incidence.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

AMENDMENT UNDER 37 C.F.R. § 1.111
U.S. Patent Application No.: 10/615,399

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The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



Chid S. Iyer
Registration No. 43,355

SUGHRUE MION, PLLC
Telephone: (202) 293-7060
Facsimile: (202) 293-7860

WASHINGTON OFFICE

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